

14. A feedback device according to claim 13, wherein the inherently conductive polymer is a polypyrrole, a polythiophene or a polyaniline.

15. A feedback device according to claim 13, wherein the transport electrode is formed from indium tin oxide.

16. A feedback device for a structure according to claim 1, wherein the sensor includes a transducer and separate feedback indicator.

17. A feedback device according to claim 16, wherein the sensor includes a transmitter to allow the feedback indicator to be remote from the transducer.

18. A feedback device according to claim 1, wherein the transmitter operates in the microwave frequency range.

19. A feedback device according to claim 1, wherein the sensor includes a wheatstone bridge circuit where the electrical current path provided by the conductive polymer material is the variable resistance segment of the circuit.

20. A feedback device according to claim 19, wherein the electrical current path provided by the conductive polymer material is a strip coated on the elastic fabric such that the length of the strip aligns with the direction of extension of the elastic fabric caused by the mechanical input of interest.

21. A feedback device according to claim 19, wherein the conductive polymer material is coated on the elastic fabric in a U-shaped configuration such that the sides of the U align with the direction of extension of the elastic fabric caused by the mechanical input of interest.

22. A feedback device according to claim 19, wherein the conductive polymer material is coated on the elastic fabric in a multi-pronged fork configuration wherein the length of each prong aligns with the direction of extension in the elastic fabric caused by the mechanical input of interest.

23. A feedback device according to claim 22 wherein the prongs have different inherent electrical resistance, wherein electrodes attached to the ends of any selected pair of prongs produce different response characteristics to a mechanical input.

24. A feedback device according to claim 19, wherein the feedback indication is produced whenever a mechanical input is greater than a predetermined threshold.

25. A feedback device according to claim 24, wherein the device includes two or more current paths, such that the feedback indication from a first current path is produced by a mechanical input greater than a first threshold and the feedback indication from a second current path is produced by a mechanical input greater than a second threshold.

26. A feedback device according to claim 25, wherein the first threshold is different to the second threshold.

27. A feedback device according to claim 26, wherein the first and second current paths are closely adjacent.

28. A feedback device according to claim 24, wherein the sensor has two or more current paths in a laminated structure.

29. A feedback device according to claim 28, wherein each of the current paths trigger a feedback indication at different thresholds.

30. A feedback device according to claim 29, wherein the laminated structure has layers including different polymer coatings, each coating forming one of the current paths, wherein each coating produces a feedback indication at different degrees of extension.

31. A feedback device according to claim 24, wherein the current path has non-uniform conductivity characteristics along its length whereby the sensor can detect the changes

in impedance of predetermined sections of the current path such that each section triggers a feedback indication at different thresholds of mechanical input.

32. A feedback device according to claim 1, wherein the mechanical input of interest is pressure applied to the current path.

33. A feedback device according to claim 32, wherein the current path is provided by a laminated assembly including a fabric layer sandwiched between two polymer layers.

34. A feedback device according to claim 1, wherein the device is configured to monitor lower limb motion.

35. A feedback device according to claim 34, wherein the device is configured for monitoring knee joint motion and/or ankle joint motion.

36. A feedback device according to claim 35, wherein the device is used as a training aid during landing training programs for participants in sports with a high incidence of knee and ankle injuries such as football, netball, basketball or skiing.

37. A feedback device according to claim 1, wherein the device is configured to monitor upper limb motion.

38. A feedback device according to claim 1, wherein the device is configured to monitor torso, head and/or neck motion.

39. A feedback device according to claims 37, wherein the device is used as a training aid to improve the technique of participants in activities such as the bowling technique of a cricketer, improve the basket shooting technique of a basketballer or netballer, improve the serving technique for a tennis player or improve the swing of a golfer, or improve the posture of participants in activities of daily life, work or recreation.

40. A feedback device according to claim 34, wherein the fabric is formed into a sleeve wherein the conductive polymer coating is positioned on the sleeve, such that in use, the feedback indicator provides an indication in the form of an audio signal to alert the participant when they are using inappropriate limb joint motion.

41. A method for producing a feedback indication in response to a mechanical input to a structure, the method including:

attaching electrically conductive fabric to the structure, the fabric having an electrical current path position on the structure such that mechanical input to the structure causes the electrical impedance associated with the current path to change;

applying a voltage across the current path; and

using a sensor for detecting the change in the impedance and producing a feedback indication.

42. A method according to claim 41, wherein the device is a biomechanical feedback device and the structure is a moveable biological structure.

43. A method according to claim 42, wherein the electrically conductive fabric is an elastic fabric at least partially coated with an electrically conductive polymer material.

44. A method according to claim 41, wherein the feedback indication is an audio signal.

45. A method according to claim 41, wherein the indication is a vibration or other mechanical stimulus that is sensed by the user.

46. A method according to claim 41, wherein the feedback indication is a change in colour of part of the sensor.